Crown Manufacturing Company, Inc.
858 PRODUCTION PLACE NEWPORT BEACH, CALIFORNIA 92660 714-548-0221

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PRICING

Prices, discounts and quotations are subject to change without notice, and will be those in effect at the time of shipment.

TAXES

5% California Sales Tax will be collected from California residents.

WARRANTY

Crown Manufacturing Company, Inc. warrants that it will repair or replace to the original purchaser without charge, fob Newport Beach, California, any products manufactured by it which are returned to the Company, freight prepaid, within 90 days from the date of shipment from its plant, and which are found to be by our examination faulty or defective in material or workmanship.

The Company will not be responsible for any damage or loss caused by delays, failure, or any consequential damage arising from any cause whatsoever, nor for labor, transportation, lodging, or any other charges in the replacement or repair of defective parts.

This warranty to repair or replace is the only warranty expressed or implied by Crown Manufacturing Company, Inc.

Equipment re-sold by us and not of our manufacture is warranted only to the extent of the original manufacturer's warranty.

Warranty will not be in force for any merchandise that is not paid for in full to Crown Manufacturing Company, Inc., or that has been altered in any way.

CANCELLATIONS

Cancelled orders are subject to payment of charges equal to all cost incurred by the Company up to the date of cancellation.

RETURN OF GOODS

Permission from the Company must be obtained before returning any merchandise. Returned merchandise must be prepaid or will not be accepted. New material of current design accepted by the Company for return is subject to a restocking charge of 20%.

TERMS

A 25% deposit is required for all COD orders. Full payment plus freight may be forwarded with the order. Personal checks take 3 weeks to clear our bank. For prompt service, send money orders or certified checks. All shipments are fob Newport Beach, California, 92660.

CLAIMS

All goods shall be considered delivered to the purchaser when they are placed in the hands of the carrier and consigned to the purchaser. Loss, damage or destruction of any merchandise is assumed by the purchaser and claims must be made by the purchaser to the carrier.

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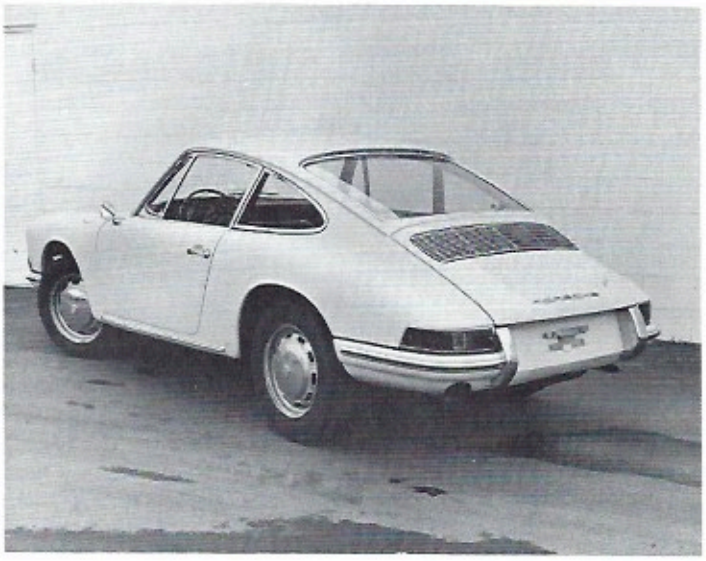


General Information on Volkswagens Converted to Corvair POWER

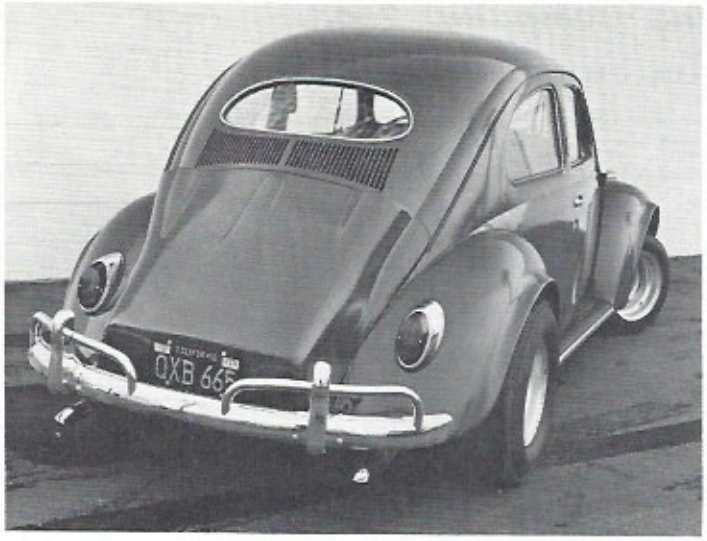
PICTURE YOURSELF SAILING OVER THE TOPS OF HILLS that you previously labored up in a lower gear at less than highway speed! Head winds are no longer a matter for the least consideration. YOUR CAR HANDLES BETTER and has more traction because of the slight rear-ward weight bias and de-cambering caused by an extra hundred pounds over the rear wheels. Most of the racing cars built today have over 60% of the weight on the rear wheels for better traction and handling.

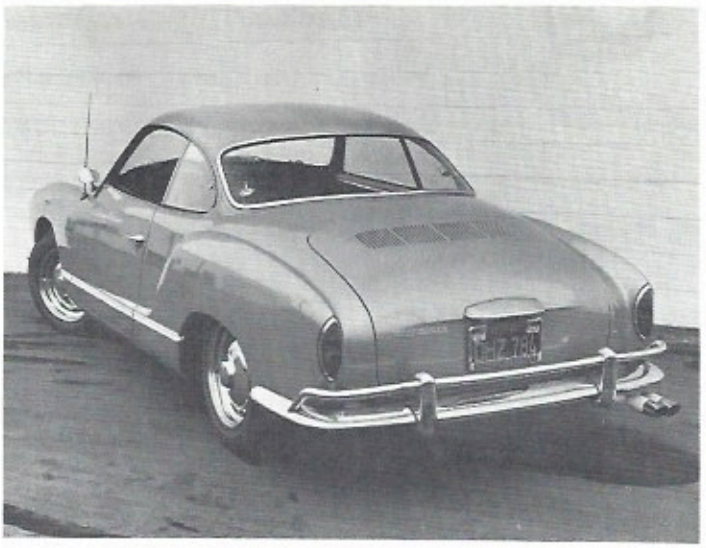
It has long been an established axiom among Hot-rodders that "THERE IS NO SUBSTITUTE FOR CUBIC INCHES," or cubic centimeters, if you prefer. It is possible to squeeze more power out of a small engine, but alas, always at a disproportionate decrease in reliability and longevity. If we look around a little, we can see that there is an air-cooled power plant made by Detroit, (and it is rumored that the basic design was commissioned from Porsche by General Motors) which has twice the displacement and three times the torque of the Volkswagen unit in its mildest form and many different horsepower ratings to choose from: UP TO 180 STOCK HORSES from the 1965 and later models! Compare this to 36, 40, 50, or even "Super 90"; if you wish. The Corvair is a reliable, go-to-the-grocery-store type engine built for years of dependable, low maintenance service by the largest, most successful automotive manufacturer in the world. All this is available FOR YOUR VOLKSWAGEN SEDAN, TRANSPORTER, KARMANN GHIA OR PORSCHE.

When the Germans built the swing axle Volkswagen and Porsche transaxle, they cleverly provided a means for reversing the rotation of the axles by making the cases symmetrical so that the ring gear may be placed on the other side of the pinion gear. This seems to have been done primarily to allow the use of spur reduction gears at the outboard end of the Transporter axles. Ergo, if the axle direction may be reversed, so may the direction of rotation of the engine. This gives us a practical way to allow for the opposite rotation of the Corvair and Volkswagen engines. IT IS A VERY STRAIGHTFORWARD, STEP-BY-STEP PROCEDURE WHICH CAN BE FOLLOWED BY ANYONE WITH MECHANICAL APTITUDE AND HAND TOOLS. We send you instructions with your kit, OR SEND $5.00 AND WE WILL MAIL YOU THE INSTRUCTIONS AND LATER DEDUCT THIS FROM KIT COST.

THERE IS VERY LITTLE SHEET-METAL CUTTING TO BE DONE; nothing which shows on the Porsche (an inner body panel), the radius is removed from the side pans inside engine compartment on the Ghia, and only alteration of the license plate identation is necessary on the Transporter. The center panel (between the rear fenders) is removed from the Sedan and it becomes practical and good-looking with my "fast back" deck lid. These things really haul because of their low weight and are quite simple to convert to Corvair power. The Northern California (1964 N.C.S.C.C. Class Champ, Big Modified) Autocross Champion car was a Volkswagen Sedan with a modified Corvair engine. It beat all Sting Rays and Cobras, believe it or not! A local V.W. Sedan with a slightly modified 140 H.P. '65 Corvair engine turns 110 MPH in 12 seconds in the ¼ mile at Lions Drag Strip in Long Beach, and beats everything "off the line."

A much modified Corvair powered Meyers Manx topped everything at the "First Annual Bug-In" in October, 1968 with over 120 mph and a low 11 second time for the quarter-mile. These may not be your main interests, but I am sure you will enjoy the power provided by a stock Corvair engine in whatever vehicle you have decided to use.





THE BEST AND EASIEST WAY to handle the difference between the 12 Volt Corvair system and the 6 Volt Volkswagen is to install a 12 Volt Voltage or Alternator Regulator with 12 Volt bulbs. A resistor is spliced into the hot wire for the wipers and radio and the gauges function O.K. as is. The newer 12-volt electrical system requires no change for a Corvair conversion.

From April to November, 1964, my "102" Transporter went over 15,000 miles, including a 7,800 mile transcontinental trip with no trouble, not even spark plugs and points. Five oil changes - period. Average mileage - 19½ MPG. DURING THE SUMMER OF '66 I TOWED A MEYERS MANX OVER 10,000 MILES AND AVERAGED 17 MPG. (1966 V.W. CAMPER WITH 110 H.P. CORVAIR ENGINE.)

When listening to engines in wrecking yards, do not be concerned if the engine has valve clatter at first. It takes some time for the lifters to become unstuck after the engine has been sitting awhile. Generally speaking '62 and later engines are more desirable because they are better engineered. I think you will be more than satisfied with the performance of ANY CORVAIR ENGINE from 80 H.P. on up in Transporter-type vehicles.

I HAVE CONSISTENTLY BEATEN PORSCHE SUPER 90s up to 75 MPH with my Kombi (102 H.P.) Wind resistance raises hell with me about there! The Porsche '64 Coupe with 140 H.P. engine pegs out at 125 MPH with more left. Our Ghia ('57) accelerates a little better (lighter) with a 110 H.P. engine but does not have quite the top that the Porsche has. All three vehicles handle better. THE MOST NOTICEABLE HANDLING IMPROVEMENT IS IN THE TRANSPORTER. The change caused by the hundred pounds additional weight, further de-cambering the rear suspension almost to the neutral point, makes it take the corners flat with virtually no body lean and no tendency to "tuck a wheel." As you know, this excessive positive stock camber is the reason so many Volkswagen Transporters get flipped on tight, rough turns.

A GOOD HIGHWAY CRUISING SPEED FOR THE TRANSPORTER IS 70-75 MPH, or whatever the law allows. The mileage goes down drastically above 75 on account of the large frontal area. You can average a much higher speed with a Corvair engine in your vehicle because hills just don't seem to exist any more. THINK HOW GOOD IT WOULD FEEL TO BE ABLE TO PASS OTHER CARS GOING UP HILL, instead of having to look for a place to hide off to the right, while rowing your way with the gear shift lever! Mileage depends strictly on how much of the increased power you wish to use. If you drive it "Volkswise" you can get Volkswagen mileage.

WHATEVER YOUR VOLKSWAGEN-TYPE VEHICLE is, the transformation to Corvair power through CROWN Corvair ADAPTATION WILL BE A REWARDING EXPERIENCE. Call your local wrecking yard for an appointment to listen to Corvair engines. Pick one out. CHECK THE PARTS YOU NEED FROM THE ORDER BLANK, RETURN WITH MONEY ORDER OR CERTIFIED CHECK TO CROWN MANUFACTURING COMPANY, 858 PRODUCTION PL., NEWPORT BEACH, CA. 92660. I KNOW THAT YOU, like so many others who have already converted their vehicles to Corvair engines, WILL ENJOY DRIVING when you have the POWER TO DO WHAT YOU WISH WHEN YOU WISH TO DO IT. A CROWN MFG. Corvair conversion will give you POWER when you need it; POWER to pass, POWER to haul a trailer, POWER to go up hill without going through the gears or reducing speed, POWER to buck a headwind without affecting your cruising speed.

YOU OWE IT TO YOURSELF: AFTER LONG SUFFERING, YOU DESERVE IT!

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Corvair Engine to V.W. Transaxle Kits

WITH CROWN ADAPTOR KITS you can **POWER** your VW Transporter, Sedan, Porsche, Karmann Ghia, or Buggy with a Chevrolet Corvair engine. You can expect reliable results with Crown quality kits and components. Crown supplies you with the adaptor kits which include instructions to convert to Corvair **POWER.**

THERE ARE TWO BASIC METHODS to compensate for the opposite rotation of the VW and Corvair engines. Both are completely reliable arrangements and your choice depends on the following circumstances:

Method No. 1

Are you planning to remove and check or repair your transaxle?

If so, it is easy to reverse the ring gear of all swing axle VW's to get the drive direction opposite. (See #5100 kit series).

Method No. 2

Are you planning to rebuild your Corvair engine?

Is your car equipped with independent rear suspension (i.r.s.) such as the '68 VW bus, or Porsche 912-911 models?

If so, you should plan to reverse the direction of rotation of the Corvair engine. (See the #5150 cam kit series).

Either the reversal of the engine or ring gear in the transaxle will work with all swing axle VW and Porsche vehicles, or cars built from their rear suspension components, but i.r.s. cars **MUST** use the reversed engine method. (See #5150 kit series).

In addition to the essential adaptor components, you will find other items to assist you in finishing your conversion with professional style.

Crown Corvair-to-VW Adaptor Kits – Reversed Ring Gear Method #1

Crown Competition Adaptor Kit for adapting Corvair engines to VW vehicles includes:

5001	engine adaptor
5002	offset starter adaptor and bushing set
5003	heavy duty flywheel
5006	competition pressure plate
5005	clutch disc
5007	Hi-Volume oil pump
5008	throttle linkage
5012	beryllium copper spring washers

Kit #5103 **26 lbs.** **$218.00**

Crown Deluxe Adaptor Kit for Corvair to VW conversions includes:

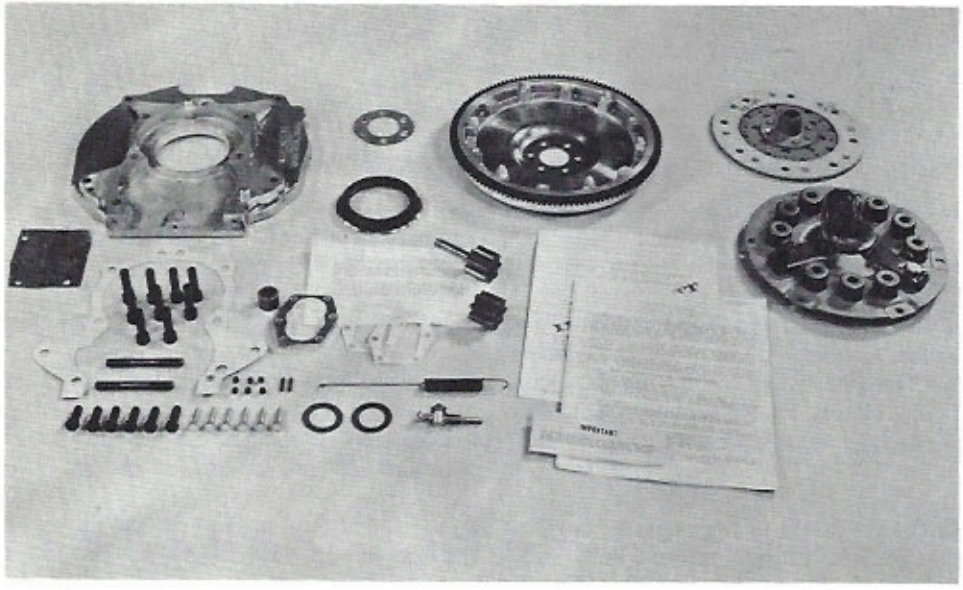
5001	engine adaptor
5002	offset starter adaptor and bushing set
5003	heavy duty flywheel
5004	heavy duty pressure plate
5005	clutch disc
5008	throttle linkage
5012	beryllium copper spring washers

Kit #5102 **25 lbs.** **$185.50**

Basic Adaptor Kit for Corvair to VW conversions includes:

5001 engine adaptor
5002 offset starter adaptor and bushing set
5003 heavy duty flywheel
5008 throttle linkage

KIT #5101 **15 lbs.** **$146.50**



Method No. 2

Now you can **POWER-UP** your VW with a Corvair engine **WITHOUT REMOVING YOUR TRANSAXLE OR VW STARTER.** If you plan to rebuild your engine, use the reverse direction cam shaft. When reworked, the engine will fit in any VW vehicle in a few minutes with no reversal of the ring gear needed. The transaxle does not need to come out. This kit is necessary in order to convert a '68 or later VW station wagon, automatic sedan with independent rear suspension or a 911-912 Porsche. The ring gear in the transaxle cannot be reversed in these models.

5152 DeLuxe Reverse Cam Adaptor Kit includes: $174.50

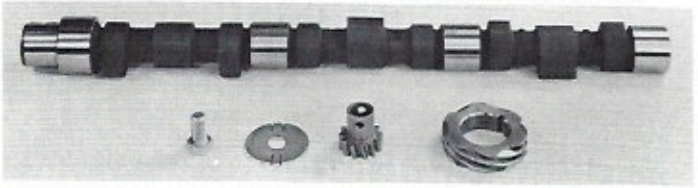
5001 engine adaptor
5053A heavy duty flywheel (for '66 and earlier VWs)
- OR -
5053B heavy duty flywheel (for '67 and later VWs)
5004 pressure plate
5005 clutch disc
5008 throttle linkage

Add to these components the cam of your choice. We suggest the A or B cam if the engine is to retain basically stock compression and carburetion.

5153 Competition Reverse Cam Adaptor Kit includes: $207.00

5001 engine adaptor
5053A heavy duty flywheel (for '66 and earlier VWs)
- OR -
5053B heavy duty flywheel (for '67 and later VWs)
5005 clutch disc
5006 competition pressure plate
5007 high volume oil pump
5008 throttle linkage

Reverse Cam and Left Hand Oil Pump-Distributor Gears



Add to these components the cam of your choice. We suggest the C or D cam.

5050A	**Standard 140 hp street grind cam and gears**	**5 lbs.**	**$ 94.50**
5050B	**Hot street grind, "280-H", .440 lift**		**$129.50**
5050C	**Hotter! "304-H", .470 lift**		**$139.50**
5050D	**Compeitition grind, 310-320 dual pattern, .470 lift**		**$149.50**

In order to be fully effective, the "C" and "D" cams must be used with our high pressure springs, increased compression, "140" heads (with the large valves and four carbs) or other means of increasing carburetion volume. Ports should be generously opened up and equal length headers used.

Always use the high volume oil pump with a modified engine for insurance.

"C" and "D" cams are ground from special billets. The "D" cam requires special push rods. The "C" cam is maximum for slalom type competition or road use. The "D" cam is all out for road racing or drags.

WHEN ORDERING, ALWAYS SPECIFY THE YEAR AND MODEL OF CAR AND ENGINE.

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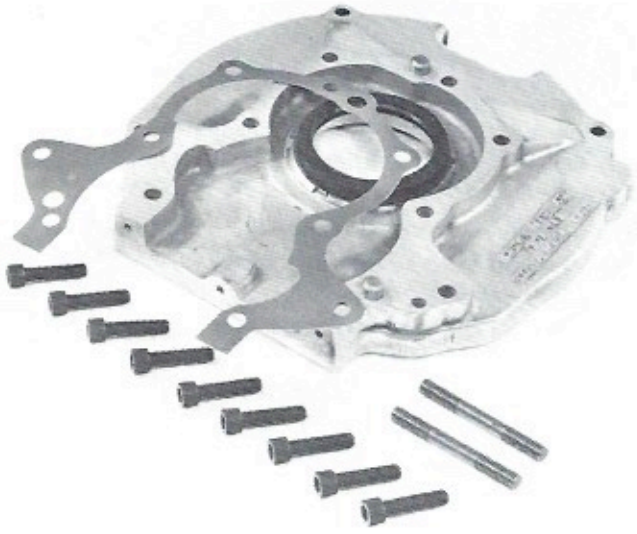
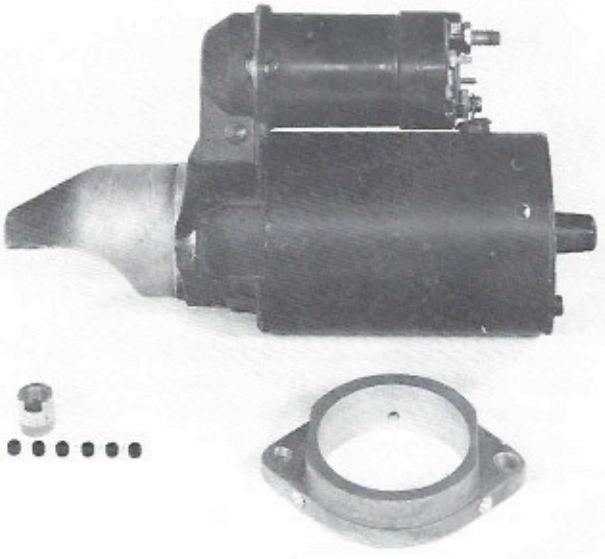
Corvair-V.W. Kit Components



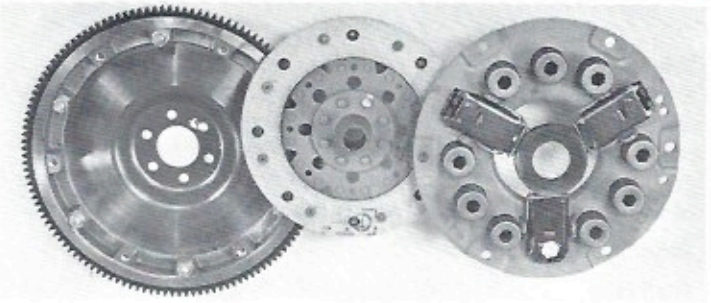
Crown engine adaptor
Precision machined Hi-strength 356-T6 aluminum engine adaptor is designed to match Volkswagen or Porsche transaxle contour and mate it to the Corvair engine. It does not require any body cutting to clear the periphery of the adaptor. Unconditionally guaranteed against breakage in use when installed as directed. Complete as shown. Fits all Corvair engines and all VW type transaxles.

5001 10 lbs. $64.50



Crown offset starter adaptor and bushing set
Mounts any Corvair starter motor to VW transaxle to run with Crown flywheels. (Illustrated with Corvair starter. Starter not furnished.)

5002 2 lbs. $17.50



Crown heavy duty light weight flywheel
Has same size clutch as 1500 VW (8" dia.) and has precision engineered ring gear exactly mating Corvair starter teeth. Flywheel and starter adaptor **MUST** be used together.

5003L 6 lbs. $64.50

Crown heavy duty pressure plate
provides adequate pressure for engines up to 140 hp. Standard VW pressure plate gives 990 lbs. of pressure; this pressure plate gives 1,365 lbs. of pressure.

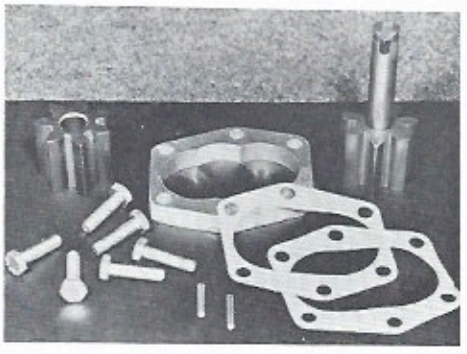
5004 8 lbs. $29.50

Clutch disc
solid center, heat and wear resistant facings, to hold Corvair POWER.

5005 2 lbs. $17.50

Competition pressure plate
Crown competition pressure plate provides adequate pressure for all engines over 140 hp. Same construction as #5004, but with more (1,575 lbs.) pressure.

5006 8 lbs. $39.50

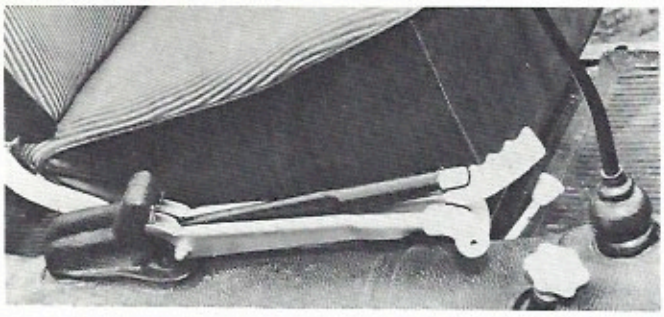


Crown Hi-Volume Oil Pump Kit
furnished as shown. Includes pump gears which are 1/3 longer than standard Corvair. Insures an adequate supply of oil under all conditions.

5007 2 lbs. $22.50

Crown Universal Throttle Linkage
couples VW throttle wire to Corvair engine. Included without charge in Corvair-VW kits.

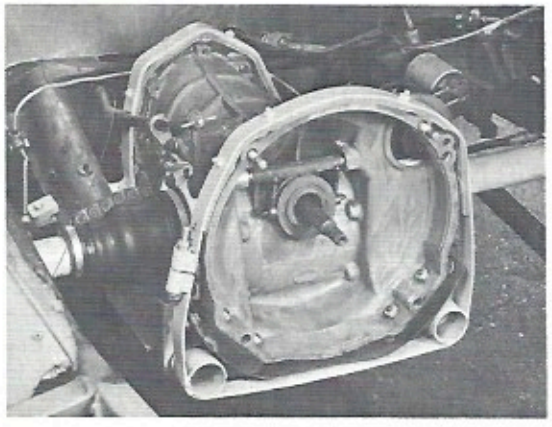
5008 $6.50



Select-A-Traction
a dual-brake system which is street legal because it does not alter normal emergency brake function. A traction aid for ice, snow, sand, works in any situation where one wheel loses its grip. Brake that wheel and the opposite wheel drives you out of trouble. Can be installed in less than 5 minutes.

Shipping weight: 2 lbs.

5015 grey $14.50 5016 chrome $19.50



Trans-Support
contains the front of the VW transaxle securely in a rubber and steel mount. It keeps the stock nose mount from breaking off the transaxle. It bolts on, no welding.

5033A fits '61 and later sedan transaxle in '61 and later VW sedan chassis. 5033B fits '61 and later sedan transaxle in '60 and earlier VW chassis (illustrated). Be sure you specify which combination you have, because there is a difference. If you order the wrong one, it won't fit. 5033C fits '60 and later transporter transaxle in transporter chassis.

5033 Shipping weight: 6 lbs. $29.50

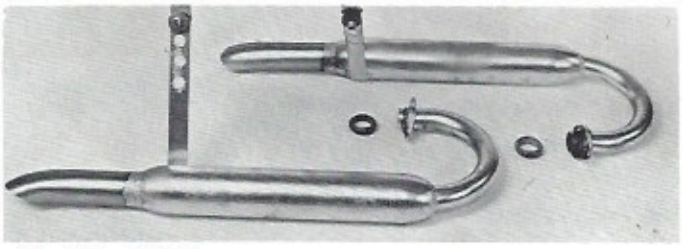
Rear Trans-Strap
is neoprene insulated steel strap which surrounds the bell housing section of the transaxle and holds it securely to the frame horns. It is a must for off-road racing to keep the rear mounts from separating. It is not needed on cars that run on the street only.

The 5033 Trans-Support and the 5034 Rear Trans-Strap should be used together for off-road driving. The 5033 keeps the nose piece and front mount intact and the 5034 keeps the rear mounts from shearing off. With these two mounts a VW, or even a Corvair, engine may be used with no additional mounts or rear support. Most of the VW chassis cars competing in the recent off-road races were using these (or wished they had).

5034 Shipping weight: 6 lbs. $19.50

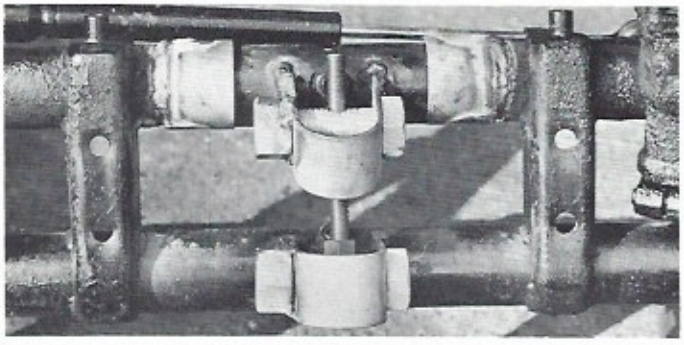
Crown Crossover Headpipe
clears the VW transaxle (Corvair headpipe does not) and adapts the stock Corvair muffler. Provides the quietest system. Use your Corvair muffler.

5009A	**for normally aspirated engines**	**4 lbs.**	**$17.50**
5009B	**for 150 hp turbocharged engines thru '64 (slip joint)**	**6 lbs.**	**$24.50**
5009C	**for 180 hp turbocharged engines, '65 and later (flange)**	**6 lbs.**	**$24.50**



Free Flow Muffler
Free Flow glass pack muffler set fits VW transporters, sedans, Porsches, Karmann Ghias, buggies with Corvair engines. Includes gaskets and hangers. (Has substantial tone).

5010 15 lbs. $32.50



Select-A-Drop
Crown engineered and manufactured device to lower and raise the front end of the VW Sedan. It will work on any VW stock sedan or light weight car using the VW torsion bar front end. It gives subtle changes in suspension tuning and marvelously improves handling.

5027 5 lbs. $17.50

Wide Base Wheels
Wide Base, welded construction wheels

5023	**7 x 14 Transporter offset**	**22 lbs.**	**$19.50**
5025	**8 x 15 Transporter offset**	**27 lbs.**	**22.00**
5021	**7 x 14 Sedan offset**	**22 lbs.**	**19.50**
5026	**8 x 15 Sedan offset**	**27 lbs.**	**22.00**
5031	**10 x 15 Sedan offset**	**32 lbs.**	**25.00**

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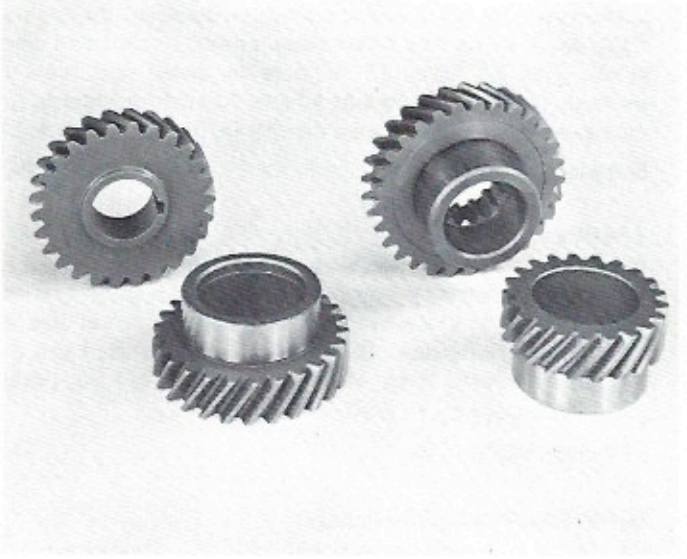
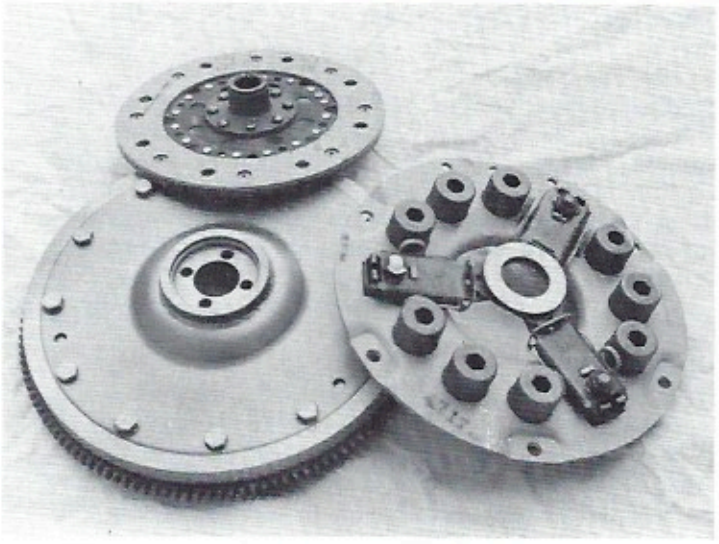
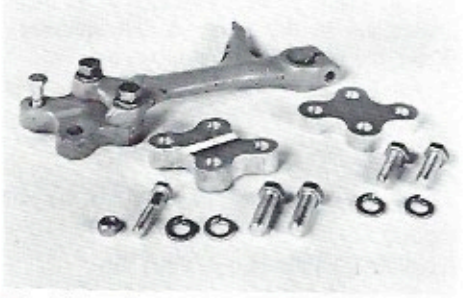




Gears for VW transaxles

Crown close ratio 3rd and 4th gears for VW transaxles. Get back the power you lost when you put on those big, fat tires. Close up the wide spread in the VW box. You get best results when used together. We have run over 120 mph in 11 seconds in a Corvair powered buggy in the ¼ mile at Orange County Raceway using these gears. They are made from the best gear material known, accurately machined and require no shims for fitting. Complete instructions for rebuilding your box included. These are especially useful for VW powered vehicles.

5147	**3rd and 4th close ratio gears**	**Shipping weight: 5 lbs.**	**$129.50**
5047	**3rd gears only 1.38:1**		**$69.50/set**
5048	**4th gears only 1:1**		**$69.50/set**



Quick Steering Extension

Improve your steering ratio by 35% and eliminate "bump steer". The Crown Quick Steering Extension fits the Meyers Manx or any buggy using the VW suspension and floor pan. It makes the standard VW 2 7/8 turns, lock-to-lock, into 1 7/8 turns.

Shipping weight: 1 lb. **$17.50**

5035A fits the '65 and earlier VW sedan suspension.
5035B fits the '66 and later VW sedan suspension.

5043 (A or B) Light VW Flywheel.

This product came about by popular demand from VW engine builders who had seen our 5½ pound, 200 mm flywheel for the Corvair-VW conversions. Throttle response becomes terrific and it is possible to run far deeper into the turns in slaloms or road racing. It's like putting on the brakes when you lift the accelerator. The stock 200 mm flywheel weighs 17½ pounds. This one weighs less than 6 pounds. Use it with the stock 1500 or 1600 VW 200 mm pressure plate and disc, or use our #5004 or #5006 pressure plate and #5005 disc (see description elsewhere in this catalog). 5043A has '66 or earlier ring gear to be used with the 6-volt VW starter only. This starter can be used on 12 volts, if you wish, with no apparent bad effects. This combination will work in any year VW transaxle. 5043B has the '67 and later ring gear which mates with the 12 volt starter and may be used in '67 and later transaxle only. The outer dimension of the 12 volt flywheel ring gear is larger than the inner dimension of the earlier transaxle! **$64.50**

5054	**VW starter bushing to allow 12-volt VW starter and engine to be used on '66 and earlier transaxle.**	**$ 3.50**
5055	**Spacers to be used on pre-1500 series Transporters when installing 1500 reduction gears (1.26:1 ratio). Takes up extra space between drum and nut. (older busses had narrower brakes and drums).**	**$5.00/pr.**

WHEN ORDERING, ALWAYS SPECIFY YEAR AND MODEL OF CAR AND ENGINE.

Transporter Heater Adaptor
fits directly on Corvair engine and, when coupled to the usual body openings by the VW type paper or plastic tubes, carries forced air heat to the front air column where the rotatable plug controls the air flow. Other vehicles should use the Porsche body valve available from the VW dealer.

5011 **2 lbs.** **$17.50**

Beryllium Copper Concave Spring Washers and Spacer Sleeve
go in place of the weak VW steel washer and shim between 3rd and 4th gears to act as a shock absorber in tunnel style transaxles ('61 and later sedan, '60 and later transporter). Makes the transaxle super strong. Included without charge in #5102 and #5103 kits. Instructions for rebuilding transaxle included.

5012 **$9.00**

Crown Basic Motor Mount
fits on rear of Corvair engine to replace all of the stock mount assembly. Fits directly to '59 and later Transporter bumper by simply drilling one hole in the bumper. Picks up the additional weight of the Corvair engine on application of power. Smooths out throttle response and eases cluth adjustment. Use with cross bar of your own fabrication for sedans, Porsches, Ghias. Not needed if you are using the #5033 Trans-Support.

5013 **4 lbs.** **$9.50**

Fiberglass Transporter Deck Lid
clears alternator, fuel pump and pulley and gives a finished appearance to your pre-'68 Transporter conversion. Touch latches are included to hold the engine compartment door closed, as the original latch interferes with the Corvair engine.

5017 **5 lbs.** **$19.50**

Transporter Air Scoops
ram air into the engine compartment for more positive cooling, for hot areas, or under extenuating circumstances. Large scoops have 30% more frontal area than others on the market. Essential for keeping VW engines alive under hard driving conditions.

5018 **8 lbs.** **$14.50/pr.**

Decals:
Super Bus, Super Bug, Super Buggy — each $ .50
set of 3 $1.00

Patches:
Super Buggy, each $1.00

5042A Anti-flood Kit
Kit for Turbo-charged engines (150 to 180 hp). The stock carburetor vent is too low and tends to flood out the engine in right hand turns when cornering power is increased above stock. This kit takes 15 minutes to install and cures the problem forever with no side effects. A must for slaloms, road racing, or just plain hard road driving. Instructions included.

Shipping weight: 1 lb. **$9.50**

5042B Anti-flood Kit
for all normally aspirated (no supercharger) engines (80 to 140 hp). When cornering power is up or the road is rough (off-road racing), the stock Rochesters flood causing power loss and high fuel consumption. This kit is quickly installed and does not interfere with stock or other air cleaner set-ups. Enough parts for 4 carburetors. Instructions included.

Shipping weight: 1 lb. **$9.50**

5042C Direct carburetor linkage
for 140 hp. engines (used with 5042B). Does away with sloppy, hard to adjust secondary linkage and couples the Rochester carburetor shafts directly, end to end, without interfering with the stock accelerator pump linkage. Two more primary carbs are needed (older ones will work if they are clean and matched). I'll bet that more "140s" are running on 2 carbs with the secondaries plugged than on 4. The problem is that the stock secondary carbs have no idle circuit and when they are not used they become inoperative. This kit hooks everything up direct like the good "Bill Thomas" set-up, but without the need for turning the carbs 90° from their original locations. Instructions include a simple synchronizing procedure.

Shipping weight: 1 lb. **$14.50**

5044Adaptor to Corvair Turbocharger
from 40 or 45 mm Weber side draft carburetor. Whee! Does this one put out some power! Notable gains throughout the range but especially at the top end. Kit includes "O" rings, "wavy washers" for the proper Weber set-up.

Shipping weight: 3 lbs. **$44.50**

Ring Gear
Ring gear, Corvair tooth pattern to fit on VW flywheel.

5003-1	**ringgear**	**2 lbs.**	**$12.50**
5001-7	**pilot bushing (VW clutch shaft into Corvair crankshaft)**		**$ 1.50**
5002-2	**Corvair-VW Starter Adaptor Bushing**		**$ 3.50**

Flywheel
Heavy duty, heavy (16 lb.) flywheel recommended for off-road vehicles only. Used for hill-climbing in sand, rock crawling or other clutch-slipping applications. Available in kits on request only.

5003H **16 lbs.** **$64.50**

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Crown "Fastback" Sedan Deck Lid

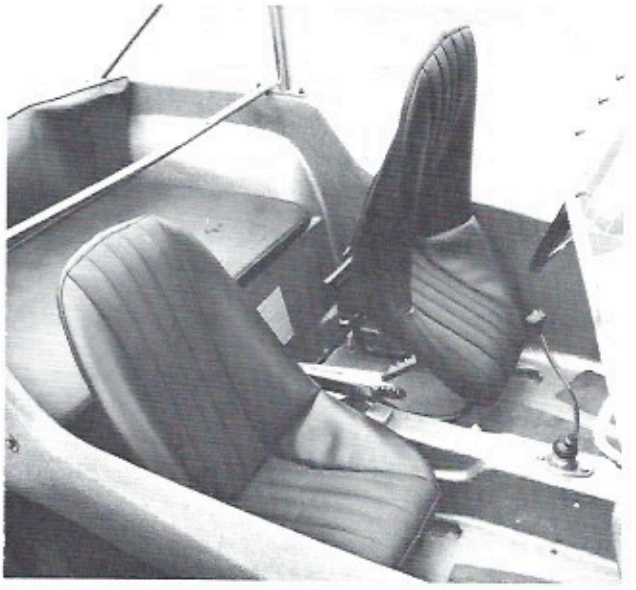
Made of fiberglass, it bonds to the top half of the old VW sedan deck lid. You paint to match your car. It has a good finish and only light sanding is required. It covers the Corvair engine and gives a finished look to your conversion.

#5014	**17 lbs.**	**$42.50**

WIDE VW FENDERS

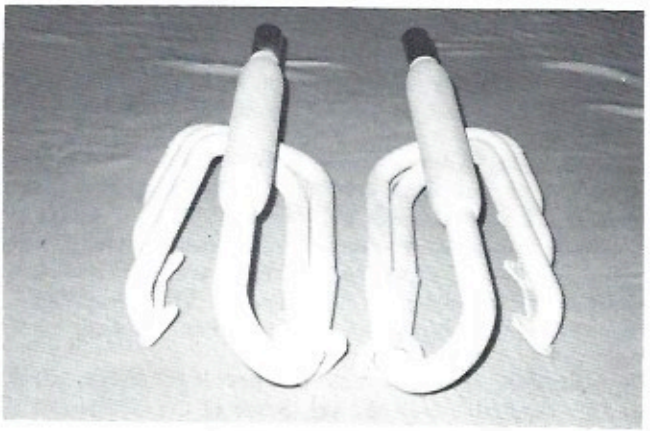
Of all the wide VW fenders on the market we think you will agree that these are the best looking and best finished ones available. They make it possible to use really wide tires even after lowering the car to the minimum height.

#5032F	**Weight 20 lbs.**	**Front Fenders (pair)**	**$85.00**
#5032R	**Weight 20 lbs.**	**Rear Fenders (pair)**	**65.00**



Beautiful, comfortable fiberglass bucket seat upholstered in the finest black material. Unique brackets fasten directly to your VW seat frames and allow seats to tip ahead for easy rear seat access.

5030A seat is the correct height for buggies	**$69.50**
5030B seat is the correct height for sedans	**$69.50**



Universal EQUAL LENGTH Headers

can be used on all Corvair powered vehicles. Flanges couple directly to our #5010 mufflers. (Lower shrouding may be retained for heaters by using tin snips to cut openings for head pipes).

#5040 Headers only	**$64.50**

TWO YEARS OF SLALOMS
DON WILCOX

The total number of events that I have run in the Crown Meyers Manx up to March, 1967 is 46. We have missed taking Fast Time of Day only six times, making us 40 out of 46 FTDs. On an average Sunday, 250-350 cars of all descriptions will run, some of which come in on trailers and are never run on the street.

Of the six losses, four were 2nd overall placings, and twice the car finished clear out of the picture. Once was not getting the carbs in the sparkling burgundy buggy back to sea level settings after Pikes Peak. The other time was with the blue buggy, a problem of not being able to turn right with the stock turbocharger carburetor that we ran at one event, and a plugged fuel line. Unfortunately, these were Championship events and these losses cost us the overall championship. Even so, we still won the class championship, and won 7th overall that year.

All of this does not include the Pikes Peak Hill Climb, which is rather a long story by itself! Basically, the blue buggy was fastest qualifier among all the sports cars, including the unlimited displacement class. In addition to that, it was faster than any of the stockers and all but 8 of the championship cars. On race day, the ground wire fell off the fuel pump and we DNFed at the Gravel Pit, 2 miles from the top of hill. Ted won in the old worn out burgundy buggy, in spite of having had no real practice, since he spent most of his efforts before the race working on the car.

The reaction to the cars has been great fun for us. Everywhere we have taken the cars for the first time, the reaction has been the same. My! What a cute little car! My wife would love it! what are you going to do with it??? You don't mean that you are going to run that in competition with the real sports cars, do you? It'll NEVER work! And so on, and on, and on.

The next thing in the sequence is always disbelief. ALWAYS! When the car performs, the "cute" reaction changes immediately to "I don't believe it!" We have gone to events with electronic timing to a thousandth of a second, made three runs of 45.62, 45.35, 45.21 for example, and still had people question the accuracy of the timing. "That time can't be right," they say, "Just look at the car!" Etc. Etc. Etc.

Unfortunately, this is as far as most people got at Pikes Peak in getting acquainted with the car. Some of the nice people who complained about the performance at Pikes Peak really can't be blamed – after all, that is the standard reaction.

What happened next is that the car began to be protested; rule changes began to show up trying to outlaw it, and so on. At the present time in slaloms in Southern California, the two modified classes that have always existed (over and under 1400 cc) remain basically the same, but a special class has been created for the Crown cars. This move was made for a variety of reasons, and one might be so that the Cobras could run both stock Class A and modified Class N without embarrassment.

The cars are an absolute blast to drive! And the only way I could describe the feel of the car would be like an early Porsche Speedster, with more traction, and more muscle than you could possibly imagine! They out-accelerate and out-brake the strongest Cobras. The cars are quite stable, and when "lost" spin out flat and controlled. The car can be spun precisely 180° and headed off in the other direction at will.

At one event, I got into the last turn a bit too hot and spun the car, crossing the timing light backwards at a good rate of knots. Since the car touched no pylons in the process, there was no penalty and the time was still good enough for FTD. Ted gave me a bad time about being so careless, and a lot of ribbing was going on over the P.A. system. There were three runs at this event, and on each of the next two, I did it again on purpose. All three runs were completed with the car sliding through the timing lights in a full spin around a 180° turn and to a stop backwards on the far side of the lights, and all three were good enough for FTD. There were no pylons hit on any of the runs.

Many excellent drivers have driven the cars on "Fun-Runs" following the events, and the results are always a huge grin when they come off the course. Quite often some pylons get nicked, also, but always on the inside of the corner. When the driver approaches the turn at what he feels is top possible speed and begins his turn, the car responds so much quicker than expected that usually an inside pylon gets picked up in the process. When you turn the wheel, you don't begin to change direction – you just did!

The cars have been outlawed at Pikes Peak (no more sports car classes). Still they are most practical for street use. They are fully street legal, unlike most competition iron, and have a soft, comfortable ride, unlike the competition sporty cars which ride like trucks. Both Ted's wife and mine drive the cars frequently, and have a ball!

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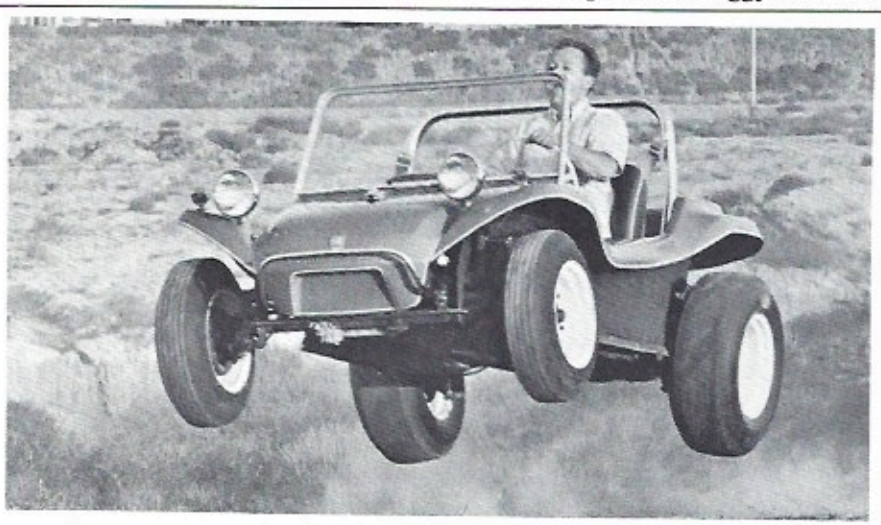
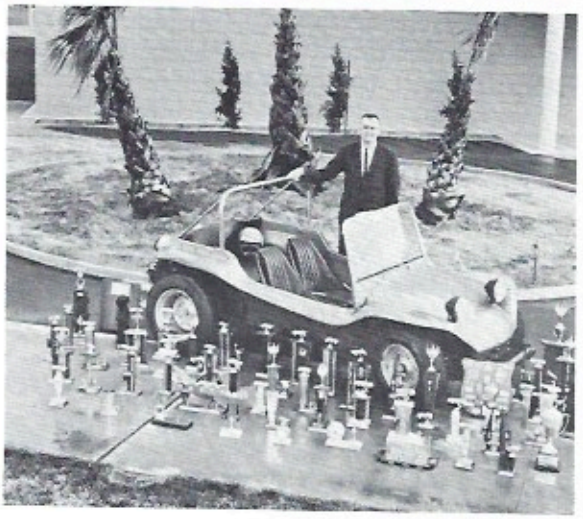
Competition Buggy Information





Crown Meyers Manx at Pikes Peak

For the Pikes Peak Hill Climb, the Crown Meyers Manx was set up as follows: Gates tires on the front were 6.50 x 13 XT Commandos on 5½ x 13" rims, and on the rear were 8.25 x 14 XT Commandos on 7 x 14" rims. These tires are without equal for side bite on dirt roads. Also on the car were a Select-A-Drop, Select-A-Traction, and two castor shims under the lower torsion tube (VW #111-401-239). The rear torsion bars were relaxed one notch on the outside serrations. The front torsion trailing arms were set parallel to the ground with the Select-A-Drop screw. A 35 pound 12 volt battery was suspended from the front end by means of bumper brackets. We do not recommend this for general use as the voltage drop from this distance causes hard starting when the engine is hot, and the battery is exposed to damage. We suggest that the battery be put in the regular place and a 75 pound removable solid steel bar be suspended from the bumper as low as possible while maintaining ample ground clearance for the course to be raced. For off-road use, remove the weight altogether and raise the Select-A-Drop as high as desired.

The ring gear of the transaxle must be placed on the other side of the pinion to allow for the opposite rotation of the Corvair engine. Since the transaxle must be removed anyway, to shorten the chassis, this is not a big project. It is fully explained in the instruction manual. Many people have asked us why we do not use the Corvair transaxle which is stronger than the VW. There are several reasons. The VW box weighs much less and the total package is shorter from the end of the engine to the axle center line. The VW torsion bars are adjustable. Coupling the Corvair box to the VW suspension is possible but much machine work is required. We have been shoving upwards of 200 hp through the VW box. We "light" both rear wheels in 2nd gear on dry clean asphalt with "super sticky" tires and total rear weight transfer for about 50 feet at the start of every slalom run, and have turned over 120 at the drags besides, and we have had no trouble since we learned the following:

DON'T	wind the engine up and drop the clutch in 1st gear.
DO	wind the engine up and drop the clutch in 2nd gear.
DON'T	use excessive throttle while bounding through the air in rocky going in 1st gear.
DO	take it easy in 1st gear. Cool it!
DO	take the ring and pinion gears to be glass bead blasted after radiusing all sharp corners.
DO	magnaflux ring and pinion gears to check for heat treat cracks.
DO	use our special beryllium copper concave spring washers in place of the fragile VW washer and shim on the pinion shaft. We have never broken a transaxle since we discovered these things.

So all in all, the '61 and later tunnel style VX box is the best choice. Don't try to use the old split box with a Corvair. Older chassis will take the later box easily by changing to a Transporter nose piece.

The very first thing to do before starting on a Manx is to buy the VW Owners Guide from the VW agency. It even covers disassembly of the transaxle as well as pictures and breakdowns of about anything you need to know to work on a VW.

Some people have asked about the gear ratio of the VW box when used in the Manx. I must say I consider it about ideal. First gear is a "granny" and permits you to idle over the roughest places imaginable, while 2nd gear is a perfect starting gear for slaloms and road use. 85-90 mph is our drag-shift point from 3rd to 4th. Speeds over 100 mph are practical because the Corvair will run comfortably past 6,000 rpm. We now have close ratio 3rd and 4th gears for the VW transaxle. 3rd gear is 1.38:1 and 4th gear is 1:1.

The only difference between the way the Crown Manx was set up for Pikes Peak and for slaloms was in the tires used and the

addition of a small 35 pound weight at the front to augment the weight of the battery. This helps to keep the inside rear wheel on the ground as the sideway "G" forces generated are much greater on asphalt than on dirt. The gas in the tank, which is high, is left down to compensate for the difference, so the total running weight is about the same but the center of gravity is lowered. The tires used for slaloms are rather special. They are 6.50 x 13 x 13 LW Blue Streaks on 5½ x 13 rims, and 6.50-6.70 x 15 Stock Car Specials (Blue Streaks) on the back on 8 x 15 rims. These tires are capped with a "Super Sticky" compound by Jack McCoy in Modesto, California. We have tried lots of tires for slaloms, but none seem to stick like these.

We are using VW drum brakes on the front end, and, to compensate for the difference in tire size so the wheels wouldn't lock up when going into a turn with the brakes on hard, we used Porsche brakes on the rear. Our 14" and 15" wheels will fit over these drums, but the 13" rims will not. This works great, but the VW brakes all around are more than adequate due to the reduced weight of the buggy. Our original slalom car won 25 out of 26 events with them.

The Pikes Peak car has a rather exotic engine with a 176 c. i. increased compression, a high lift, longer duration cam, and lightened valves (stock lifters are best), and a turbocharger which occasionally puts out about 15 pounds of boost according to the stock Corvair pressure gage. An anti-flood vent kit is an absolute necessity for the turbo carburetor! We are using the late 12 plate oil cooler and a Crown Hi-Volume oil pump to insure lots of cool oil in circulation. After experimenting with many engines, we find that a stock 140 hp engine with vent tubes in the carburetors and headers puts out enough power to gobble up Cobras in anything up through 1/8 of a mile staightaway. A 110 engine with 4 carbs and headers only lacks the top end and will do a fine job. A stock 180 does not have quite the throttle response but makes up for this at the top end. In short, almost any late Corvair engine can be made competitive in slaloms for a very modest outlay of cash.

We have found that Koni shocks are an excellent investment for the Manx both for slaloms and off-road use. Their valving is such that they protect suspension parts from breakage under severe impact loading. The VW shocks are OK for the street but Konis are the ultimate for handling at slaloms and for impact absorption off the road.

One thing to keep in mind, no matter what engine you put in your Manx, VW, Corvair, or whatever, if you are going to run it in dusty, sandy areas, the engine must be protected by functioning air filters. Even the throttle shafts must be sealed. I have seen engines completely ruined by 15 minutes of hard driving in sand with a loose filter element.

Tires for sand use include buffed down and cross-grooved drag slicks which are sometimes available as seconds. The largest Blue Streak Stock Car Specials (Goodyear), also cross-grooved, are good for sand only, but not for rocky terrain because of their light, flexible side walls. The ultimate in off-road tires is the Goodyear Terra Tire which is good in dirt or rocks, and is the best thing so far for sand use. The tire is 15" wide and has herringbone paddlewheels around the circumference. The ideal wheel size for this tire is 10"-12" wide x 15" diameter. A Manx with these wheels and tires and a Corvair engine will climb dirt and sand hills so steep that you would have difficulty climbing them on your hands and knees!

The Crown Meyers Manx won top time of day at 40 out of 46 slalom and autocross events from May, 1965 to March, 1967 with Don Wilcox driving. This car also won the Limited Sports Car Class at Pikes Peak in July, 1966 with Ted Trevor driving. This car is now retired from slaloms but is still capable of top time of day at any event.

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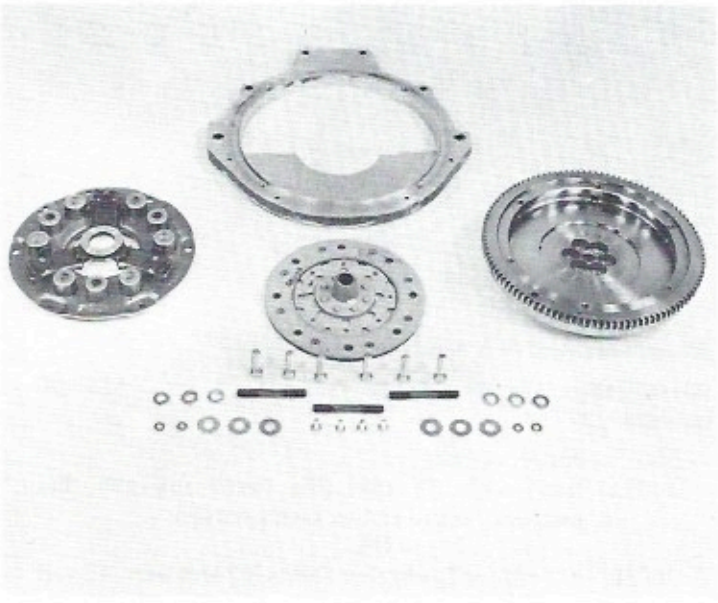
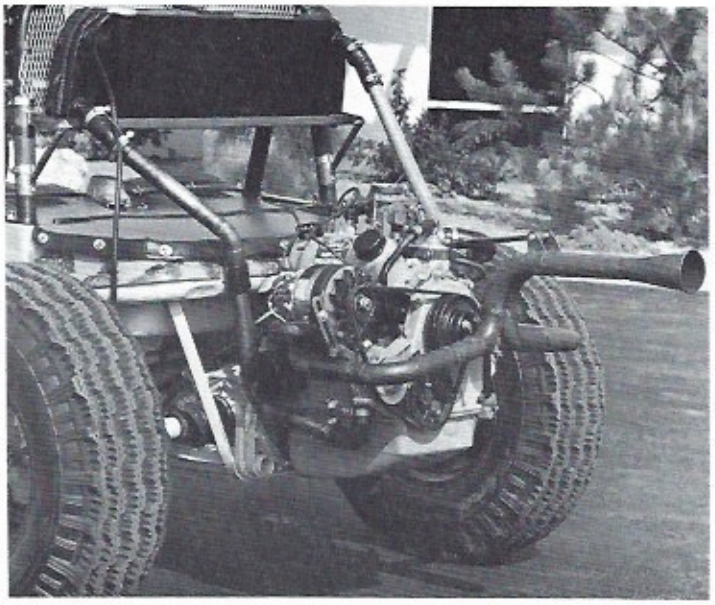


Ford "V-4" Adapter Kit



Meyers Tow'd with Ford adaptation by Crown Manufacturing Co., Inc.

"Water Pumper" Conversion Components

We like the Corvair-to-VW conversions best because of the self contained cooling system, less weight and other things that make for a simple conversion and fewer problems. There are other engines available, however, that have more power than the VW engine, and generally lend themselves to a practical conversion, especially for a buggy where placement of a radiator is not complicated by restrictions caused by a completely closed car body.

Notable examples of these are the Volvo-Burro built by Tiny Thompson of Burro Company for Bob Sinclair of Volvo Western and successfully raced at the Stardust "7-11" and the Mexican 1000, and the new Meyers "Tow'd" which uses a very compact V-4 Ford industrial engine. These engines are coupled to the VW running gear by Crown developed adaptor kits. We have a kit, also, which makes it possible to use the aluminum, small block Buick, Olds and Pontiac V-8 and the small V-6 GMC which has the same bell housing detail as the above V-8s.

A couple of advantages to using these "water pumpers" is that, unlike the Corvair, they all turn in the same direction as the VW engine, which does away with the necessity for reversing the ring gear in the transaxle or replacing the VW starter.

The "A" flywheel is needed to go in the '66 and earlier transaxle for the cars which were originally 6 volts (If the bulbs and battery are changed and resistors used with other electrical items such as windshield wipers and radio, the engines all start much easier with 12 volt systems).

The "B" flywheel is used for all vehicles which came originally with a 12 volt system (the starter pinion gear is smaller and the flywheel ring gear is larger and has more teeth) so you must order the right flywheel or your starter will not work.

We do not recommend these engines for use in VW sedans, Karmann Ghias, Porsches, or VW Transporters mainly because of effective radiator placement problems, but they can be utilized for many off-road type vehicles (buggies) to make use of the very effective VW type suspension.

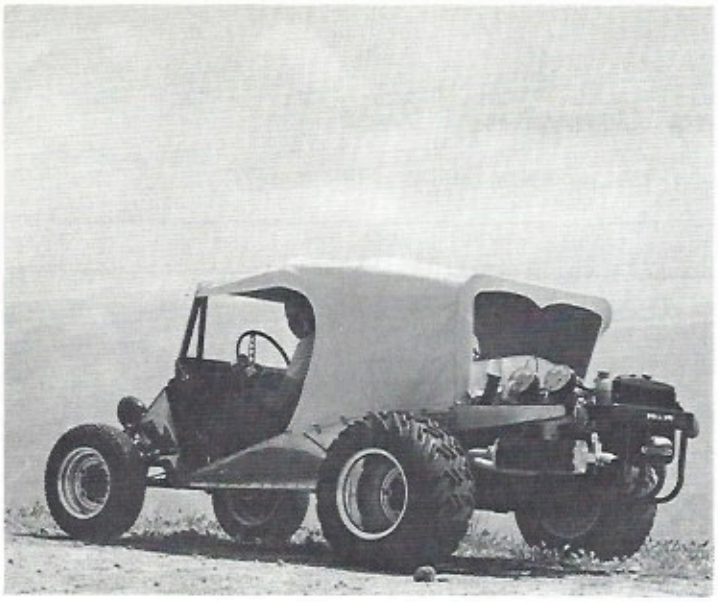
Ford V-4 to VW Adaptor Kit

#6102 DeLuxe Adaptor Kit includes **$168.00**

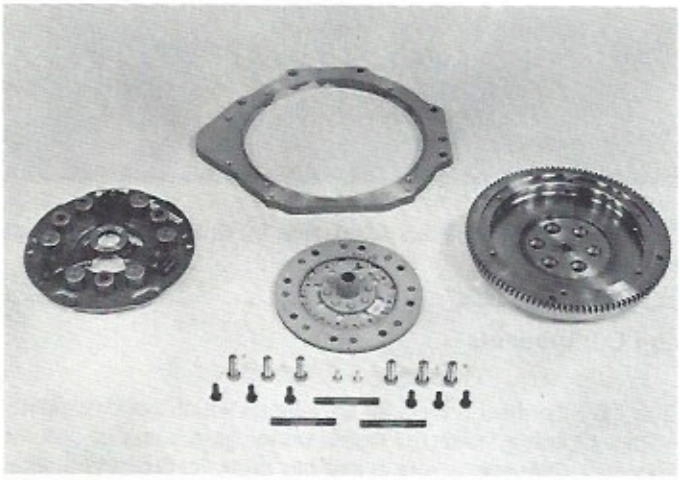
6001	engine adaptor
6003A	heavy duty flywheel (has starter ring gear that matches '66 and earlier, 6-volt starter)
	- OR -
6003B	heavy duty flywheel (matches '67 and later, 12-volt VW starter)
6004	pressure plate
6005	clutch disc

Shipping weight: 31 lbs.

6006 competition pressure plate . . . . . add $10.00



Bob Sinclair in his Volvo-Burro, built by Tiny Thompson and adapted by Crown Manufacturing Co., Inc.



Volvo to VW Adaptor Kit

#2102 Deluxe Adaptor Kit **$168.00**
includes:

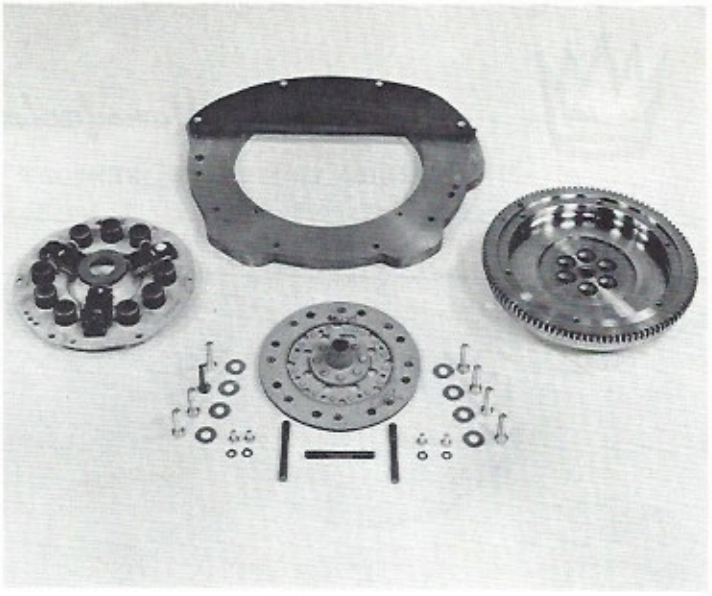
2001	engine adaptor
2003A	heavy duty flywheel (has starter ring gear that matches '66 and earlier, 6-volt VW starter)
	- OR -
2003B	heavy duty flywheel (matches '67 and later, 12 volt VW starter)
2004	pressure plate
2005	clutch disc

Shipping weight: 31 lbs.

2006 competition pressure plate for engines over 130 hp. **add $10.00**

The B-18 Volvo engine or the new 2 liter B-20 Volvo engine must be used. The older 3 main bearing engine does not bolt up!

WHEN ORDERING, ALWAYS SPECIFY YEAR AND MODEL OF CAR AND ENGINE



Aluminum B-O-P to VW Adaptor Kit

#3102 Deluxe Adaptor Kit **$168.00**
includes:

3001	engine adaptor
3003A	heavy duty flywheel (has starter ring gear that matches '66 and earlier, 6-volt starter)
	- OR -
3003B	heavy duty flywheel (matches '67 and later, 12-volt starter)
3006	pressure plate
3005	clutch disc

Shipping weight: 47 lbs.

Engines that will fit:
- Aluminum Buick V-8: '61 - '63
- Aluminum Pontiac V-8: '61 - '62
- Aluminum Oldsmobile V-8: '61 - '63
- Cast Iron Buick V-6: '62 - '68*

*Small engine only, with the same bell housing detail on the block as the aluminum V-8 engines listed.

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THE CROWN CORV-8

The Corv-8 is not a "quick and dirty" week-end trick to gain a little horsepower. It is instead, a complete "system" package of joined together, available components to give the end result of the best handling, quickest, safest high-speed road machine we know how to build. By keeping an essentially stock looking Corvair body, the car does not attract the unfavorable attention often given by the "law" to special bodied automobiles which are much harder to build.

This is not a vehicle for a novice driver, nor will it appeal to those who wish nothing but slow speed and soft, over-stuffed chair comfort from their vehicles. It is a superbly balanced unit which stands heads and shoulders above anything that wears plates for handling and performance. It is the ultimate in a vehicle for the true automotive enthusiast who does not mind paying a little more in effort and money to have the very best.

After 2 years of development and testing, Crown Manufacturing Company has ready for you a Sports "G.T." car for the road; a mid-engine, fully independent suspension, stock appearing machine (if you wish) which performs much like a "Group 7" car made legal for the street.

We found that the late model Corvair lends itself particularly well to this project for several reasons. It has:

Fully independent suspension

A "transaxle package"

Adequate room for mid-engine placement

Parts common with the General Motors V-8 line (transmission especially) making a "bullet proof" conversion

Correct rotation of the transaxle for coupling the V-8 engine to the front (reversal of engine is not necessary)

An engine highly valued for VW conversions and dune buggy use for you to sell.

We have made hundreds of wheel-spinning starts with the prototype since installing our heavy duty spider gear posi-unit without breaking any drive line parts.

Many people have asked about using the old, pre-'65 swing axle Corvair for this conversion. We have seen conversions made using the early Corvairs. The owner/builders all agree that the results are not worth the trouble involved. There is no strong, one piece input shaft available as there is for the late "Saginaw" transmission. The whole set up is weaker (gears are smaller) and the suspension is not good enough to provide a basis for a really good road car. It is possible to put the late suspension in the early car by moving the rear wheels back and doing a lot of cutting and welding, but again, the results are not worth the trouble and expense.

We weighed the Corv-8 at Orange County Raceway with about half a tank of gas and no spare tire. It weighed 2770 pounds. We also weighed a '66 Corsa 140 hp with a 4-speed under the same conditions except that it had a spare tire and jack still in

it, and it weighed 2630 pounds. How can this be? We know that the V-8 with its cast iron block, radiator and water has to go close to 300 pounds more than the Corvair engine. The answer becomes apparent when you start to muscle out the seats. They are heavy! The front Corvair bucket seats, of course are too large to go back in, but they can be sold.

With a used 327"-350 hp (stock cast headers and running quiet mufflers) the car ran 105 mph in 12.22 for the quarter mile at Orange County Raceway. It goes around the road course like it was "on rails." The car is extremely stable under full power application and has a minimum of wheel-spin and "end-swapping" tendencies due to the low polar moment weight concentration just ahead of the rear wheels. It is no accident that all of today's high powered racing machines are built along these same lines.

We all know the problems involved with trying to make a high performance machine out of all the rest of Detroit's front-end heavy, live rear axle sleds. Power is worthless if you can't put it to the ground effectively, and Model "A" type suspension, with its high unsprung weight, cannot follow a bumpy surface in a turn.

In order to install a V-8 engine (283-327-427) in a late Corvair, it is necessary to remove the engine and transaxle, cut holes in the floor for the pan and engine air, and in the front trunk space for ducting of radiator air flow. This is quickly and easily done with an air chisel.

The input shaft (Crown #4002) fits in place of the Corvair clutch gear on the transaxle main shaft (Crown #4003). This shaft has had the end altered precisely to fit the new special bearings (included with the #4003 shaft) because the internal part of the Corvair clutch gear is slightly different from what our V-8 input shaft needs to be. Our adaptor plate (Crown (#4001) goes from the nose of the Corvair transmission to the V-8 bell-housing (shatter-proof models like the Ansen can be used if drag racing is planned).

The engine fits through the right door for installation.

Yes, everything turns in the right direction! The standard flywheel and clutch arrangement for the V-8, or a light weight, blow-up proof model can be used. We have used Weber units and the 427 light weight cast stock flywheel.

The standard Corvair rear crossmember is used where our adaptor plate (#4001) bolts to it to support the front of the transaxle assembly and rear of the engine. The front of the engine is supported by stock Chevrolet mounts on the Crown cross member and engine mount brace (#4007). The rear of the transaxle is also supported by a hanger mount (#4006).

Clutch hookup is effected by a hydraulic unit using Crown hydraulic brake and clutch assembly (#4008).

The alternator is bolted to the lower left front of the engine by Crown Bracket #4014.

Wiring is handled by extending the present wires to the new locations. We provide wiring instructions with the kit.

The tachometer works with the V-8 engine the same way as it was connected to the Corvair. There is a potentiometer inside the gage itself, which is simply adjusted while comparing the reading with a previously calibrated tachometer temporarily hooked to the engine.

The combination vacuum and pressure gage may be hooked into the V-8 engine intake manifold so engine vacuum may still be monitored, as with the Corvair engine. The head temperature warning horn may be hooked up to sound under conditions of low oil pressure.

A water temperature gage is a necessity, and if you desire, a single unit combining water, oil and amp gages makes a good package. This will fit nicely at the lower center of the dash. All auto accessory stores carry these gages.

The gear shift rod and tube must be cut and fastened to the Crown shift linkage (#4005) which extends around the pan and flywheel to the shifter rod at the front of the transaxle.

If you wish to install a roll bar (#4019), it can go in at any time, but it is an easier job if done before the engine is installed.

Water pipes and hoses and radiator are hooked up after cutting appropriate holes and mounting the radiator brackets and pipes (#4013). We recommend a DeSoto or Chrysler Hemi-head radiator with a 3" core. These measure about 2' square and are a perfect fit for the space available, and the mounts are right for easy fastening. Other radiators will fit, though.

The engine is covered by #4017 rear engine cover. The front edge of this mates with the front engine cover and seats (Crown #4016) and is easily removed for engine access.

This conversion is extremely straightforward, but we would be the last to tell you that it puts itself together, because it doesn't. A mechanically inclined person should be able to do the job in 25 to 35 hours, if all parts and tools are at hand (don't forget the air chisel).

General Motors has been hinting at a mid-engine Corvette for some time, but the advent of their '68 model as designed would seem to preclude this in the near future. They always produce a model long enough to amortize styling changes made for a new body, etc. over a period of several years. I would expect that the running gear of a new Corvette designed in this manner would have about the same arrangement and parts layout as our Corv-8 conversion. This car would probably cost $5000 plus, and perform and handle about the same as the Corv-8. It might look better and you could take it back for a "warranty fight" when something broke. But you can't get one yet, so if you want the thrill of driving a car which is far more responsive than anything you can buy off the showroom floor – **THE CROWN CORV-8 IS IT.**

Send us a Postal or Western Union Money Order or certified check (personal checks must clear before shipment is made) for $200.00 and we will ship you, balance COD, fob Newport Beach, the parts you need to get started on this exciting project.

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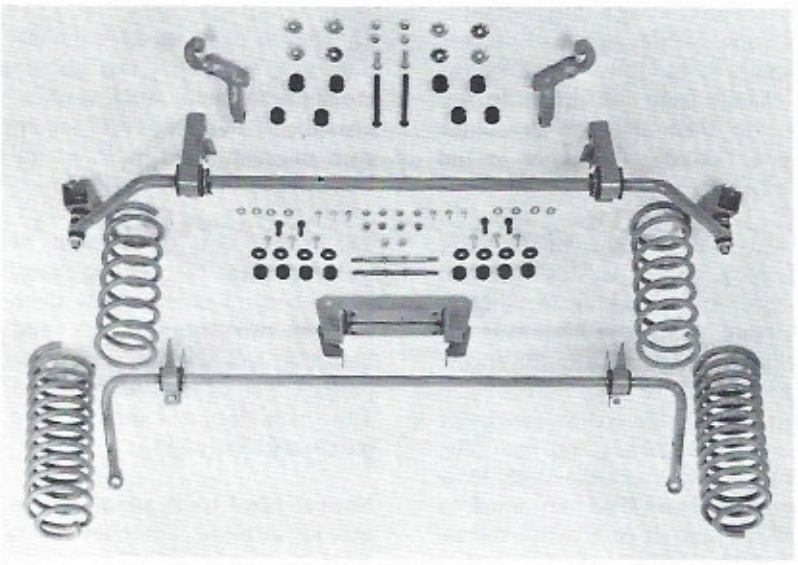


Crown Corv-8 Handling Package Works Great on '65 and Later Corvairs

Notes on Tests of the Corvair and Corv-8 at O.C.I.R. on November 26, 1968.

The cast involved were suspension expert Trevor Harris of Harris Dynamics in Costa Mesa, Bud Whitfield of Whitfield Automotive, Ted Trevor, President of Crown Manufacturing in Newport Beach, and Charlie Hayes, racing driver and President of Hayes Equip in Santa Ana, California.

John Thawley, Technical Editor of **HOT ROD** Magazine was there to record results of suspension changes on both the standard 140 hp Corvair, which was being used for a control, and the Corv-8, which already had its suspension properly modified. The Corv-8, in case you are not familiar with it, is a mid-engine V-8 layout in a late Corvair which has approximately 58% of the weight on the rear wheels and a very low polar moment. With proper wheels and tires and the Crown heavy-duty suspension kit for Corvairs, this car has phenomenal handling characteristics approaching those of a "Group 7" car.

The 140 hp Corvair had its suspension tightened up and the wheels aligned the previous day at Whitfield Automotive. The stock brakes were replaced by Camaro Sintered-iron brakes which were modified to fit the '66 Corvair. These modifications can be made at Crown Manufacturing in case somebody wants these brakes on a late ('65 and up) Corvair. They proved to be far better than any other proprietary brakes for maximum deceleration over a period of time. Charlie Hayes was unable to fade the brakes in this car after many, many laps of hard braking. Charlie is known for "standing on the gas" and I can report that he can also stand on the brakes.

Stock organic linings are good for something like one hard stop on a Corvair and they are faded. The brakes on the Corv-8 were Velve-Touch linings, which are a good combination-compromise, as they work excellently without any warm-up, where the Camaro sintered-iron brakes needed one stop when cold to release the pedal pressure to a comfortable level. However, the Velve-Touch linings are not capable of extremely high speed stopping over a period of time, and they did fade on the Corv-8, probably causing about 1 — 1-1/2 seconds difference in lap time over what could have been achieved. (According to Charlie Hayes' estimate)

The 140 hp '66 Corvair with completely stock suspension and standard stock 650-13 tires as issued with the car was first tested as a control to see what the times would be around a short circuit at the back end of the O.C.I.R. The times came out to be 40.4', 40.6', 40.4' for three separate runs around the course with no notable changes in anything to the engine or suspension. The car at this time exhibited pronounced roll tendencies, and considerable under-steer on sharp turns. Although it was fairly predictable, it was not a pleasant car for someone used to "Group 7" cars to drive under high speed conditions.

At this point, the stock 140 hp corvair and the Corv-8 were jacked up side by side and the wheels and tires exchanged. The tires from the Corv-8 were the Goodyear fronts (10.35 x 15) which were used last year in the USAC championship circuit, mounted on 8 x 15 rims. The tires are approximately 9-1/2" across and after careful analysis, it is obvious that the only way to make these tires work well is to keep them flat on the ground. A car such as the stock Corvair, which has consider-

able camber change or, "swingaxle-ish" tendencies in the rear, cannot keep the tires flat on the ground and they cannot do their job as far as keeping the car in a turn or giving good cornering power.

These tires and wheels were put on the stock 140 hp Corvair and run on the same course. Times of 39.2 and 39.0 indicate that not much advantage came from changing to these tires and wheels by themselves. The car was jacked up again and the Crown Corv-8 suspension package, which includes front and rear anti-roll bars and a bracket incorporating a different pick-up point for the lower control arms in order to reduce camber change, was installed. This change in the lower control arms gives an almost zero camber change from full droop to full bump and this, along with the increased roll resistance furnished by the bars, made a fantastic difference in the cornering power.

With the Indy tires and wide wheels still on the car the times immediately dropped to 36.5, 37.2, and 37.1. This indicated that the tires and suspension were now working together in order to improve the times around the course by raising the cornering power only, as no changes were made to the engine to change its performance in any way. The times reflect benefits gained strictly by removing most of the roll tendencies of the car by using fairly large sway bars, front and rear. The attachment points are changed in front from the stock location because the stock anti-sway bar doesn't do very much in the way of restricting roll of the car; it just twists things. Going to a larger stock bar in the stock location on a Corvair is largely wasted effort because of this.

A Corvair does not normally have a rear anti-sway bar, and the one that comes in the Crown Suspension kit helps by increasing the stiffness and kept the car from rolling, and this partially explains why we have such a phenomenal increase in ability to get around the course with a few bolt on changes in suspension.

The next test was made with the stock tires back on the car and the suspension package just the way it was for the previous test. The stock tires gave a time of 39.5 and 39.3. This was but slightly better than the original times of 40.5 average, and indicated that the suspension changes need wide, flat tires on a wide base wheel to make them totally effective.

The Corv-8 was tested with the stock Corvair 6.50 tires on 5-1/2 x 13 rims. The times were not very impressive (37.8 and 37.6) meaning that the tires and wheels were severely limiting the capabilities of the car.

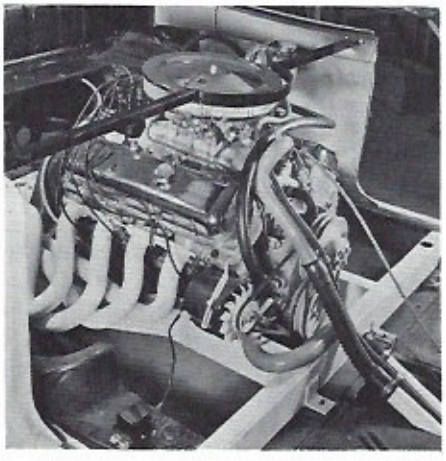
When we re-tested the Crown Corv-8 with the good tires and wheels, the times were down to 33.7, 33.2, and 33.0. Charlie Hayes said the brakes were faded and he was beginning to have difficulty in keeping the car on the course at the ends of the straights. As he pointed out, probably we could have achieved a 1 – 1-1/2 second reduction in these times if we had the Crown sintered-iron brakes on this car as we did on the 140 hp Corvair.

The course being used for the test was a fairly short course. As previously noted, it was about a 40 second course for the stock Corvair with stock suspension and tires, and in the same instance, it was about a 33 second course for the Corv-8 set-up with the suspension package and the large, flat tires and wide wheels mounted.

The heavy duty suspension package furnished by Crown includes a rear bracket for changing the pick up points of the lower control arms, quick steering arms for the front, four springs, two anti-roll bars, and the necessary nuts, bolts, brackets, and grommets for hooking this all together. This package will fit any '65 or later Corvair and sells for $250.00. The price does not include tires and wheels which must be purchased separately.

Normal hand tools are all that is required to put the suspension kit in place. There are several different sizes of bars available, the standard 7/8" bars fore and aft give a very slight high speed under-steer condition which would be desirable by most people for high speed road driving or road course running. On the other hand, a slalom application requires considerable over-steer. A smaller bar in the front and a larger bar in the rear would promote over-steer. These are available and can be traded or purchased separately so they may be changed for different driving conditions depending on the course being run. Once the initial installation of the handling package has been completed, changing the front and rear bars is a very simple matter, and takes only a few minutes. It can be done at a location somewhere away from a garage with just a matter of a couple of wrenches and some way to get the car up in the air so that you can get underneath it to work.

Charlie Hayes said; "The Crown Handling kit on the stock Corvair completely transformed the car. The car is now completely controllable in the turns and it handles like a proper race car." – "A Ball to drive!"



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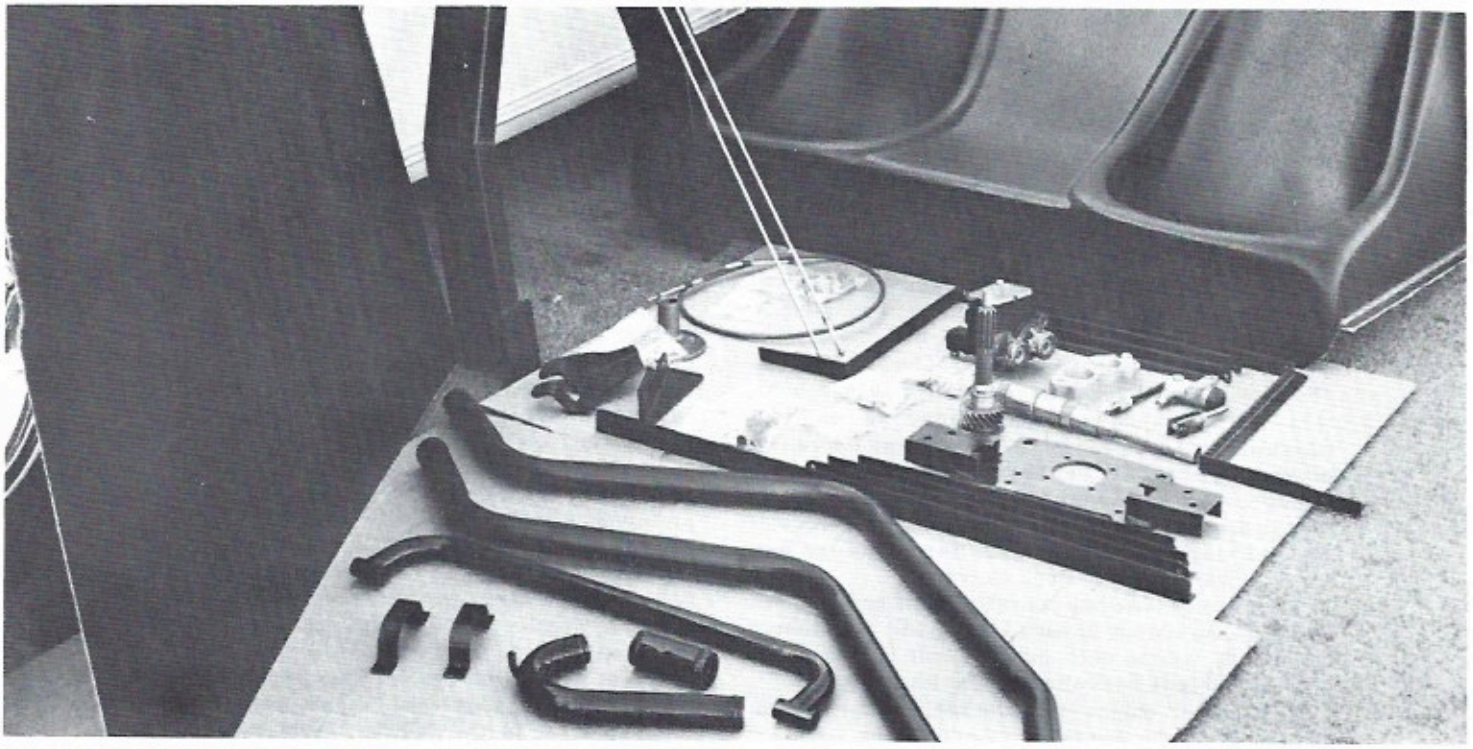

4102 C-8 Kit

#4101 Basic Adaptor Kit **$196.00**

for hooking a V-8 engine to a '66 or later Corvair transaxle, and for use in special bodied cars contains:

4001 engine adaptor plate
4002 input shaft
4003 main shaft and bearings
4005 shift linkage

#4102 Corv-8 Adaptor Kit **$598.00**
contains the basic kit plus:

4006 rear transaxle mount
4007 front cross member engine mount
4008 hydraulic brake and clutch kit
4012 water pipes
4013 radiator bracket
4014 alternator bracket
4015 throttle cable and fittings
4016 seats and front engine cover
4017 top engine cover

Also available:

4018	Equal length tuned headers	**$125.00**
4019	Roll bar	**80.00**
4020	Hi-performance handling package (Component prices on request)	**195.00**
4023	Heavy duty spider gear & Positraction unit Exchange for your good unit	**50.00**
4124	Upholstery kit black, off-white, saddle tan	**119.50**
4125	Wheels, plain:	**25.00**
	chrome:	**40.00**
	4125A 7" x 13"	
	4125B 7" x 14"	
	4125C 8" x 15"	
4126	Sintered Iron Brake Shoes	**49.50**

Note: #4003 main shaft – return your good, used shaft to us for $8.00 credit.

Complete detailed, illustrated instructions are sent with each kit, or send $10.00 (refundable with kit purchase) for instructions.

a MIND-BENDER

(Pictures and captions deleted)

REPRINTED FROM HOT ROD MAGAZINE, SEPTEMBER 1968

Text and photos by John Thawley ■ If General Motors does get around to producing the much-rumored mid-engine Corvette in a year or so, you could be the first guy on your block to meet one heads up with a homemade bomb. Nothing so startling in that until you figure out that the entire project could cost less than two grand, looks like the granddaddy of all sleepers and still provides reliable transportation.

All of this is a part of the world that Ted Trevor of Crown Manufacturing in Costa Mesa thrives in. The latest Trevor touch is manifested in a conversion kit which allows the mating of any V8 Chevrolet to a late model ('66 or newer) Corvair — placing the engine in the back seat, running through a four-speed box and retaining the fully independent rear suspension. The result is a low-priced, trouble-free, mid-engined wildcat which may retain the outward appearance of a stock Corvair.

Since Trevor is selling conversion kits and includes detailed instructions in each kit, we will not attempt to verbally tighten each nut and bolt in this story. However, this is basically what is involved.

The Corvair engine and transaxle are removed. You may sell the engine to a buddy if he wants to play "King of Volkswagen Hill," but save the transaxle. The seats are removed and holes cut into the floor for oil pan access, motor mounts and engine air. Holes are also sliced into the trunk for ducting of radiator air flow. You'll need an air chisel for all of this unless you want it to be a two-year project.

The drive train is a rather straightforward arrangement. Crown supplies an input shaft which fits in place of the Corvair clutch gear on a Crown transaxle mainshaft. An adapter plate goes from the nose of the Corvair transmission to the standard Chevy V8 bellhousing. The basic drive train is now complete and ready to run. Internally, the Corvair gearbox is the same as the full-size Chevy gearbox, so the apparent risk of shucking a gearbox is no more than in a hopped-up Chevelle.

The standard Corvair rear crossmember is used and bolts to the adapter plate to support the front of the transaxle assembly and the rear of the engine. Front mounting and engine location come in the form of stock Chevy mounts attached to a Crown crossmember and engine mount bracket. As a final touch in the mounting department, they supply a hanger bracket for the rear of the transaxle.

Clutch actuation comes from hydraulics — courtesy of GM trucks. Crown supplies an adapter for both master and slave cylinders. The alternator is tucked out of the way at the lower left front of the engine by an adapter. A wiring diagram is provided with each kit. There's not much to it, since the system remains 12 volts, rear-engined and Chevrolet.

Beefy gearshift linkage is supplied, which routes motion around the bottom side of the engine and into the gearbox. A radiator is mounted up front and pipes routed down through the shallow tunnel. Depending on how far you plan to carry the project, headers and a rollbar may be installed. Trevor supplies templates for an engine cover that may be constructed of plywood, insulated and carpeted. (The prototype vehicle was finished off in black, so the engine in the back seat is almost undetectable).

A choice of three stock rear gear ratios, 3.27:1, 3.56:1 and 3.89:1, puts the conversion in the ball park for economy or performance. Performance — the word takes on new meaning after a ride in this car. Foot flat on the floor in first gear produces no wheel spin on dry pavement — just forward motion. (Sixty percent of the vehicle weight is carried by the rear wheels, remember?) The prototype of this conversion with a 350-horse, 327-inch engine runs low-twelves capped up, single carb, wide street tires and drive-it-out-of-the-gate attitude. Mid- to high-elevens should not be impossible to attain with a fresh engine, tuned and uncapped.

Cornering is of the "can't believe it" quality. Trevor used the heaviest Corvair springs available, stiffer shocks and wide tires to beat all hands and the cook in a recent West Coast slalom meet. Currently under development are some suspension components that should aid the cornering situation further — though the need escapes credibility.

The conversion should be finished off with an extra-thick layer of insulation on the engine cover to suppress noise, and a sheet metal box fashioned in the rear of the car to provide trunk space where the flat six once held forth.

You'd be protested out of the pits before putting a helmet strap in place, but we wonder how much quicker the car would be than the best of the Trans-Am sedan racers. A mind-bender? Believe it, friend; Crown plans production of completed cars. ■■

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DISCOUNT POLICY AND DEALER STRUCTURE

Crown Manufacturing Company, Inc. offers a 20% discount to those in the automotive business on individual incidental sales.

To be a listed, recognized stocking dealer and qualify for a 30% discount, a business must make a purchase of $1,000.00 (list price) worth of merchandise. With a 30% discount this will amount to an expenditure of $700.00.

To qualify for a 30% + 10% discount, a dealer must make purchases totaling $2,000.00 within a year.

To qualify for a 30% + 15% discount, the yearly purchase must total $3,500.

Once a dealer has reached each dollar volume level, he will start on the new discount and continue on that discount until reaching the next dollar volume level.

Levels are computed on a yearly basis from the first purchase date. In other words, if a dealer wishes to start at a 30% + 15%, he must make an initial purchase of $3,500.

Other discounts may be arranged individually on a large volume, yearly or single item purchase.

Wholesalers who have catalogs and/or advertise in periodical publications and list Crown products by company name at suggested retail prices will be allowed an additional 5% off the net. Proof sheets and datelines must be presented to qualify.

To be placed on open account, a good credit rating must be presented. A D-U-N-S rating or a minimum of 3 California and 2 local references should be supplied. Our terms are net 30 days, Newport Beach, California. Any merchandise being shipped to delinquent accounts will be shipped COD until the account is current.

On the next page is a list of suggested products based on our sales experience over several years for potential stocking dealers. Any of these items or quantities may be changed for others in our catalog as long as the dollar volume remains the same. People in the "Buggy" sales field might want to stock more of the Select-A-Tractions, Select-A-Drops, Trans-Supports, close ratio gears, quick steering devices, wheels or seats. Light VW flywheels are selling well, also. Decals and patches are sold at 50% off to all dealers.

Kits:

5103	Competition adaptor kit	218.00
5102	Deluxe adaptor kit	185.50
5101	Basic adaptor kit	146.50
5152	Deluxe adaptor kit for reversed engine	174.50
5050A	Reverse standard 140 cam	94.50
5015	Select-A-Traction, primed	14.50
5016	Select-A-Traction, chrome	19.50
5033A	Trans-Support	29.50
5009A	Crossover headpipe	17.50
5010	Free flow glass pack muffler set	32.50
5027	Select-A-Drop	17.50
5026/pr.	8 x 15 sedan offset wheels	44.00
5035A	Quick steering extension	17.50
		$1,011.50

These are list prices. A purchase like this would result in a 30% discount, or a net cost to the dealer of about $700.00.